

# Structural Steel Fire Protection

## Product Catalogue



## Intelligent Engineered Passive Fire Protection

As a market leading manufacturer of both Fire Stopping and Structural Steel Protection solutions, Nullifire is at the forefront of smart passive fire protection. We are specialists, with one focus that has not and will not change - to protect people and buildings from fire.

With 50 years' experience in the construction industry, our offering includes a unique combination of Passive Fire Protection solutions and hands-on approach to delivering our services. These are the key differentiators that you will not see elsewhere.

You can have confidence in fire protection and rely on our systems to perform when they are called upon - Smart Protection.

A resilient and passionate team of technical experts will work hard and focus on trying to understand your needs and requirements, at every stage of your project.

Nullifire is a brand of Tremco CPG, Construction Products Group, a European manufacturer and service provider of high performance building materials.

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## Assistance When Required

**Our targeted approach allows you to access answers to all of your questions - quickly, simply and for every phase of your project.**

Our trained expert team supports architects, specifiers, main contractors and installers in product selection, specification writing and industry best practices. Involving us at the early stages of a project can help you save money and time, as well as the assurance that the products selected are fully compliant, compatible and ideal for the job at hand.

Whilst choosing the right product is vitally important, the application is equally as critical. Our extensive range of training ensures Nullifire products are applied professionally and efficiently, whilst giving installers and contractors access to new technologies and solutions.

Material take off service is also available from our technical team. By providing us with your project details, we will calculate the best product options ensuring the best commercial offer while guaranteeing compliance.

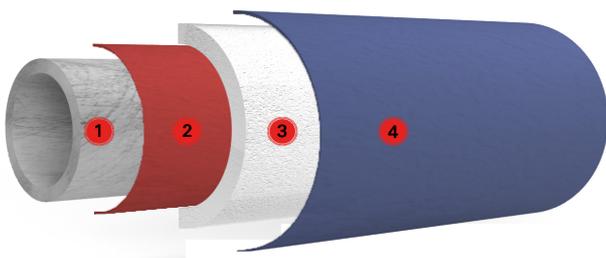
All of our product data sheets, application instructions, loading tables, specification guidance documents and additional product information can be downloaded from [www.nullifire.com](http://www.nullifire.com)

# Complete Smart Solutions

## Smartly Designed Solutions

Products engineered for compatibility, the Nullifire intumescent steel coatings range is designed to provide a complete system for fire protection and decoration of structural steel.

Minimising the risk of problems occurring on site, we can assure you that when using a complete Nullifire solution, you will achieve the desired look, compliance and protection for the project.



1. Steel Section
2. Compatible Primer
3. Compatible Nullifire Intumescent Steel Coating
4. Compatible Topcoat

### 1. Steel Section

Our range of intumescent steel coatings, topcoats and primers can be used on a mixture of steel sections and are suitable for areas up to C5. For more specific enquiries, please refer to the technical data sheets, specification guidance document and/or a member of the technical team.

### 2. Primer

Inhibits corrosion of the underlying structural steel. Primers also provide a key for the intumescent steel coating to adhere to the substrate better. If using, SC901 or SC902, primers may not be required (contact our technical services department for more information, prior to use).

### 3. Intumescent Steel Coating

The intumescent steel coating is applied to the correct thickness to provide the specified level. The correct thickness depends on the steel geometry, orientation, amount exposed to fire and can be identified from the appropriate products loading tables.

### 4. Topcoat

Smooth hard wearing finish to seal the intumescent steel coating, which protects from weather. The decorative aspect of the topcoat provides an aesthetically attractive appearance.

It is recommended that Nullifire Intumescent steel coatings are applied by experienced specialists. Full details of our recognised contractors can be obtained by contacting us.

## The Faster Way to The Smarter Solution

Quickly identify the right product for the project.

This selector provides an at-a-glance overview of the complete Nullifire steel protection range. Before referring to more detailed information about each product, use the selector to:

- Review and compare products and their specific functions
- Find suitable products for specific applications
- Always check the product application or technical data sheet for specific guidance and instructions.

Exposure Scenario		Water Based Intumescent				Solvent Based Intumescent	Hybrid Intumescent	
ISO 12944	ETAG	SC801	SC802	SC803	SC804	SC601	SC901	SC902
C1	Z2	✓	✓	✓	✓	✓	✓	✓
C2	Z1/Y	✓	✓	✓	✓	✓	✓	✓
C3	Y/X	✓	✓	✓	✓	✓	✓	✓
C4	X	X	X	X	X	✓	✓	✓
C5	n/a	X	X	X	X	X	✓	✓
6 months (max semi-exposed)		Topcoat required	Topcoat required	Topcoat required	No Topcoat required (3 months max)	Topcoat required	No Topcoat required	No Topcoat required



# Product Suitability

## Smartly Designed Solutions

Nullifire products listed are suitable for areas up to C5. For project specific enquiries, please contact us for technical advice. Remember that many projects could have a mixture of classification environments, which have to be considered independently.

### C1: Very Low Corrosion Risk

**Interior:**

Heated buildings with clean atmospheres (e.g. offices, shops, schools and hotels)

**Exteriors:**

n/a

### C2: Low Corrosion Risk

**Interior:**

Unheated buildings where condensation may occur (e.g. depots, sports halls etc)

**Exteriors:**

Atmosphere's with low level of pollution. Mostly rural areas.

### C3: Medium Corrosion Risk

**Interior:**

Production rooms with high humidity and some air pollution (e.g. food processing plants, laundries, breweries etc.)

**Exteriors:**

Urban and industrial atmospheres, moderate sulphur dioxide pollution, coastal areas with low salinity.

### C4: High Corrosion Risk

**Interior:**

Chemical plants, swimming pools coastal ships and boatyards.

**Exteriors:**

Industrial areas and coastal areas with moderate salinity.

### C5: Very High Corrosion Risk

**Interior:**

Buildings or areas with almost permanent condensation and with high pollution.

**Exteriors:**

Industrial areas with high humidity and aggressive atmosphere.

## Guaranteed Source of Quality

**Pioneering technology from Nullfire to provide building owners with lifelong traceability of products after construction phase.**

This unique technology offers a guaranteed source of quality and new levels of assurance, whilst acting as an incentive to ensure products are used and applied correctly.

- **Applicators** – Ability to ensure product installed on site is correct.
- **Main Contractors** – Ability to ensure that the whole contract chain is adhering to the same specifications.
- **Architects and Specifiers** – Ability to ensure that the specified quality products are installed without potentially inferior quality alternatives used.



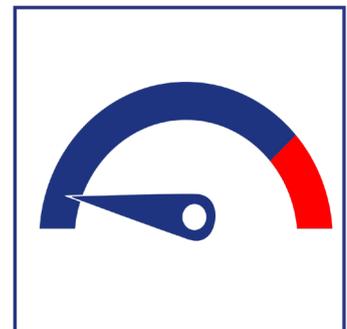
A pigment technology, which is impossible to manipulate. It's only visible with a specific Nullfire detector, owned by the team, it offers lifetime identification, remaining traceable even after a fire.



**Insurance Premiums**



**Lifetime Traceability**



**Reduced Risk**

# Fast Track & High Build Solutions

## One-Coat Protection

SC900 series are innovative patented intumescent coatings delivering ground breaking performance for the protection of internal, semi-exposed, and external steelwork. Suitable for both on-site and off-site work.

Exposure Scenario		Hybrid Intumescent	
ISO 12944	ETAG	SC901	SC902
C1	Z2	✓	✓
C2	Z1/Y	✓	✓
C3	Y/X	✓	✓
C4	X	✓	✓
C5	n/a	✓	✓
6 months (max semi-exposed)		No Topcoat required	No Topcoat required

 **SC901**  
Intumescent Steel Coating -  
Fast Track, Off-site

### Product Overview

SC901 is a low VOC, one coat, high build system for off-site use. It offers up to 120 minutes fire resistance to “I” section beams, columns, hollow columns, cellular beams, solid steel rods and concrete filled hollow columns.

**Advantages at a glance:**

- Fire rating up to 120 minutes tested to BS476 and EN13381: Part 8
- Touch-dry in 1 hour, handle & transport within 1 day
- Early weather resistance, shower proof within 1 hour
- Self-priming system tolerant of light rusting to steel, up to 2 weeks post blasting
- High-build potential with all rating possible in one application
- Certifire CF5144
- Optifire®+ unique traceability identifier.

Properties (typical values)	
Specific gravity	Part A: 1.55 ±0.02, Part B: 0.99 ±0.01, Mixed: 1.46 ±0.02
Volume solids	85% ±3%
VOC	137 g/l
Mix ratio	By weight 100:12, by volume 5.6:1
Pot life or sprayable life	15 minutes
Theoretical coverage	1,750 g/m <sup>2</sup> based on applied 1.00 mm dry film thickness
Storage	Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf life	12 months when stored as recommended in original unopened container

 **SC902**  
Intumescent Steel Coating -  
Fast Track, On-site

### Product Overview

SC902 is a low VOC, one coat, high build system for on-site use. It offers up to 120 minutes fire resistance to “I” section beams, columns, hollow columns, cellular beams, solid steel rods and concrete filled hollow columns.

**Advantages at a glance:**

- Fire rating up to 120 minutes tested to BS476 and EN13381: Part B
- Fast cure & weather resistance, even below 0°C, touch dry and shower proof within 1 hour
- Achieves external durability with an approved topcoat
- Self-priming system, up to 2 weeks post blasting
- High-build potential with all rating possible in one application
- Certifire CF5144
- Optifire®+ unique traceability identifier.

Properties (typical values)	
Specific gravity	Part A: 1.55 ±0.02, Part B: 0.99 ±0.01, Mixed: 1.46 ±0.02
Volume solids	85% ±3%
VOC	137 g/l
Mix ratio	By weight 100:12, by volume 5.6:1
Pot life	Minimum 60 minutes
Theoretical coverage	1,750 g/m <sup>2</sup> based on applied 1.00 mm dry film thickness
Storage	Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf life	12 months when stored as recommended in original unopened container.

## Proven Protection

Nullifire solvent based products offer fast applied robust fire protection for structural steelwork. These products also offer a more robust environmental tolerance and resistance as well as a decorative finish, and are suitable for on-site or off-site application.

Exposure Scenario		Solvent Based Intumescent
ISO 12944	ETAG	SC601
C1	Z2	✓
C2	Z1/Y	✓
C3	Y/X	✓
C4	X	✓
C5	n/a	X
6 months (max semi-exposed)		Topcoat required



## SC601

### Intumescent Steel Coating - Off-site & On-site

#### Product Overview

SC601 is a single pack acrylic thin film intumescent steel coating for the protection of internal and semi-exposed structural steelwork. SC601 is optimised to provide 60 minutes fire resistance to "I" section beams & columns, hollow beams & columns, as well as cellular beams, solid steel rods and concrete filled hollows. SC601 also provides 90 minute fire resistance and limited 120 minute protection.

#### Advantages at a glance:

- Competitive loadings
- Compatible with various primers and topcoats
- Easy to apply by airless spray, optimised to provide fire protection for 60 minutes as well as limited range of sections for longer protection times
- Suitable for off-site and on-site applications
- Certifire CF5767
- Optifire®+ unique traceability identifier.

Properties (typical values)	
Specific gravity	1.36 ± 0.02
Volume solids	72% ± 2%
VOC	317 g/l
Consumption	670 g/m <sup>2</sup> @ 0.6mm DFT
Storage	Store in secure, dry warehouse conditions between +0°C and +35°C
Shelf life	12 months when stored as recommended in original unopened container

# Water Based Solutions

## Economical & Versatile

Nullifire water based solutions offer safe, fast and economical fire protection for internal steelwork. Our pioneered water based technology gives a smooth finish in a faster time than other methods. A preferred choice among specifiers and applicators, given its environmental benefits.

Exposure Scenario		Water Based Intumescent			
ISO 12944	ETAG	SC801	SC802	SC803	SC804
C1	Z2	✓	✓	✓	✓
C2	Y	✓	✓	✓	✓
C3	Y	✓	✓	✓	✓
C4	X	X	X	X	X
C5	n/a	X	X	X	X
6 months (max semi-exposed)		Topcoat required	Topcoat required	Topcoat required	No Topcoat required (3 months max)



## SC801

### Intumescent Steel Coating On-site

#### Product Overview

SC801 is a water based, white, thin film, intumescent coating for the protection of internal structural steelwork. It offers up to 120 minutes fire resistance to "I" section beams, columns, hollow tube columns and cellular beams.

#### Advantages at a glance:

- Suitable for internal use on structural steelwork for up to 120 minute fire resistance
- Easier to apply product for greater efficiency on site with improved smooth matt finish
- Low odour and very low VOC
- Compatible with various primers and topcoats
- Certifire CF5365
- Optifire®+ unique traceability identifier.

Properties (typical values)	
Specific gravity	1.38 ± 0.02
Volume solids	68% ± 3%
VOC	1 g/l
Theoretical coverage	2,050 g/m <sup>2</sup> based on applied 1.00 mm dry film thickness
Storage	Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf life	6 months when stored as recommended in original unopened container



## SC802

### Intumescent Steel Coating On-site

#### Product Overview

SC802 is a water based, single pack product. SC802 offers the optimum mix of economic, environmental, aesthetic and practical benefits. Optimised to provide 60 minutes fire resistance to "I" section beams, columns, hollow columns, beams and circular beams.

#### Advantages at a glance:

- Competitive "all-round" 60 mins water based product
- Easy to spray to reduce downtime and potential difficulties on site
- Gives an outstanding smooth, matt finish
- Outstanding adhesion and durability
- Compatible with various primers and topcoats
- Certifire CF5420
- Optifire®+ unique traceability identifier.

Properties (typical values)	
Specific gravity	138 ± 0.02
Volume solids	70% ± 2%
VOC	6 g/l
Theoretical coverage	1,958 g/m <sup>2</sup> @ 1000 µm DFT
Storage	Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf life	9 months when stored as recommended in original unopened container



# SC803

## Intumescent Steel Coating On-site

### Product Overview

SC803 is a water based, white, thin film intumescent coating for the protection of internal structural steelwork. Optimised to provide 60 minutes fire resistance to “I” section beams, columns, hollow columns, hollow beams, cellular beams, solid steel rods and concrete filled hollow columns. Available for Ireland and EU only.

#### Advantages at a glance:

- Ultra low VOC
- Market leading loadings
- Easy to apply with excellent aesthetics
- Compatible with various primers and topcoats
- CE ETA 20/1210
- Optifire®+ unique traceability identifier.

Properties (typical values)	
Specific gravity	1.38 ± 0.02
Volume solids	69% ± 3%
VOC	0.5 g/l
Theoretical coverage	1,000 g/m <sup>2</sup> based on applied 0.5 mm dry film thickness
Storage	Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf life	9 months when stored as recommended in original unopened container



# SC804

## Intumescent Steel Coating On-site

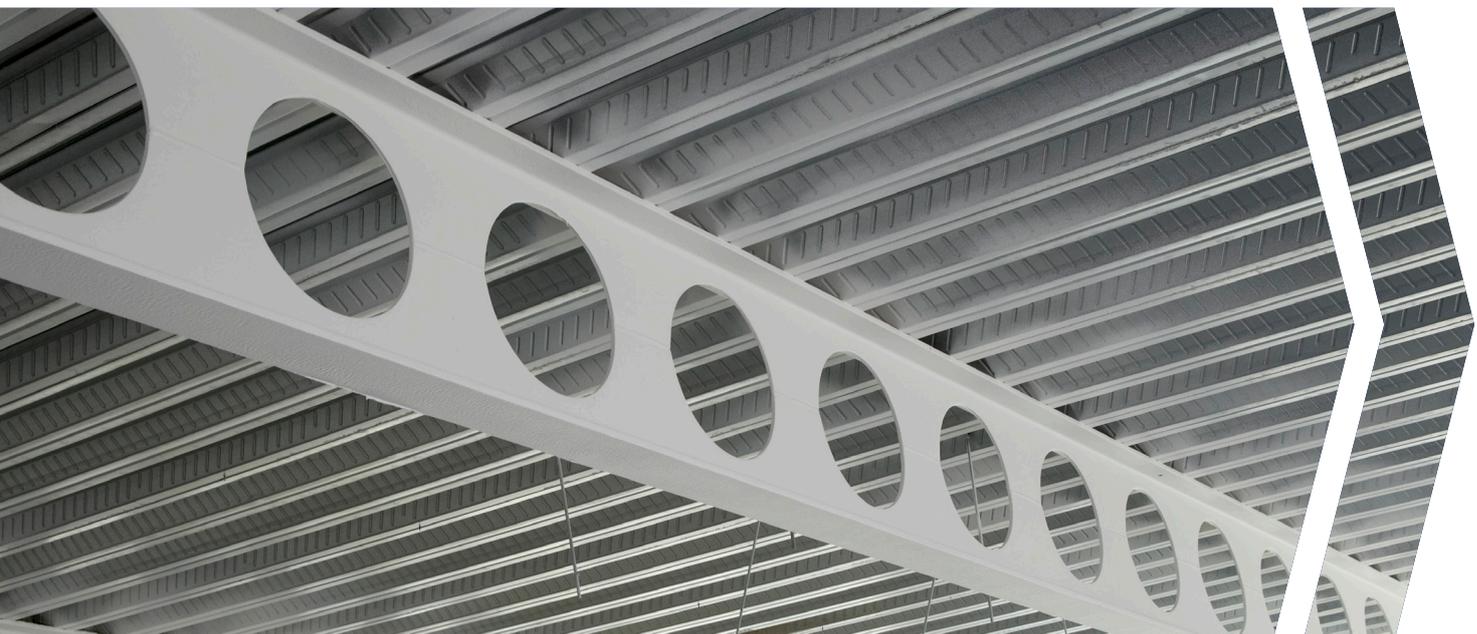
### Product Overview

SC804 is a water based, white, thin film intumescent coating for the protection of internal structural steelwork. It was developed to give optimised loadings for 90 minutes, and up to 120 minutes fire resistance to “I” section beams, columns, hollow columns, hollow beams, cellular beams, solid steel rods and concrete filled hollow columns.

#### Advantages at a glance:

- Ultra low VOC
- Competitive loadings
- Excellent aesthetics
- Compatible with various primers and topcoats
- Certifire CF5929
- Optifire®+ unique traceability identifier.

Properties (typical values)	
Specific gravity	1.38 ± 0.02
Volume solids	69% ± 3%
VOC	0.5 g/l
Theoretical coverage	1,000 g/m <sup>2</sup> based on applied 0.5 mm dry film thickness
Storage	Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf life	9 months when stored as recommended in original unopened container



# Primers & Topcoats

## Tested for Compatibility

**It's crucial to test primers, intumescent steel coatings and topcoats together to avoid costly problems and ensure a smooth fire protection process. Compatibility also guards against de-lamination of the coatings once installed which can be extremely costly to rectify once construction has finished and the building is in use.**

Primers are designed to protect the surface of structural steel from corrosive attack. They also provide a suitable key onto which a Nullifire intumescent steel coating can be applied.

Topcoats provide an outstanding quality decorative finish, which is particularly useful where steelwork remains exposed as opposed to being hidden by false ceiling installations or by boarding around columns.

We're very meticulous and rigorous when selecting and advising the appropriate primers and topcoats for the full steel protection system. All our intumescent steel coatings have been tested with a wide range of primers and topcoats from our sister-company from RPM's Performance Coatings Group- Carboline Ltd. These can be ordered directly from Nullifire, your single source for a high performance integrated system.

Technical Hub:  
01942 929 039



# Carboguard 633

## A Two-Component Phenalkamine Epoxy

### Universal Primer

Heavy duty, high build primer or intermediate coating. Low temperature curing and fast overcoat-able, can be used on galvanised steel.

- Excellent anti-corrosive properties
- Applicable as one-coat system up to corrosion class C4 (ISO 12944-2)

#### Approved for use with

Steel Coating SC601, SC801,SC802,SC803 and SC804

# Carbothane I34 HP

## Aliphatic Acrylic Polyurethane

### High Gloss & High Solid Polyurethane Topcoat

Thin film, high gloss finish with exceptional weathering performance characteristics. Used extensively in virtually all industrial markets, it provides a smooth, durable finish that has superior resistance to corrosion, abrasion and chemical exposure.

- High solids, low VOC content
- Excellent weather-ability

#### Approved for use with

Steel Coating SC601, SC801,SC802,SC803, SC804, SC901, SC902

# Carbothane I56 SG

## A Two-Component Acrylic Polyurethane Topcoat

### Semi Gloss Acrylic Polyurethane Topcoat

- Suitable for application over a number of epoxy primers, and can be applied directly on galvanized steel. Provides good weathering performance with a surface that is easy to keep clean.
- Outstanding performance properties in both mild and aggressive environments
- Perfect where non-chalking finish is required

#### Approved for use with

Steel Coating SC601, SC801,SC802,SC803, SC804,SC901, SC902

# Carbomastic I5 LT

## Aluminium Epoxy

### Aluminium Epoxy Primer

High build coating with excellent adhesion to rusted steel and most aged coatings. It penetrates through rust to steel substrate and stops further corrosion and undercutting.

- Surface tolerant
- Recommended for painting over rusted steel where hand cleaning only is possible
- Fast curing at low temperatures
- High solids give good coverage and reduced solvent emission
- Excellent maintenance primer for piping, bridges, tank exteriors, ships and offshore structures etc..

#### Approved for use with

Steel Coating SC601, SC801,SC802,SC803, SC804

# Carbocoat I15

## Single pack high build primer

### Fast Drying Primer

Well suited for fabrication shops that need fast cure to dry and handle times. May be topcoated with conventional alkyds or acrylics for color, aesthetics or additional protection.

- Rapid cure
- VOC compliant for most areas
- Good for filling properties on rough and pitted steel
- Fast dry to handle properties

#### Approved for use with

Steel Coating SC601, SC801,SC802,SC803, SC804

Available to order  
through us!

# Testing & Certification

At Nullifire, we are able to assist with a comprehensive selection of passive fire protection products, giving architects, specifiers, and contractors the ability to achieve fire protection requirements within any building structure.

Working closely with our in-house technical team, 3<sup>rd</sup> party accredited installers can deliver the best possible and most cost-effective fire protection solution, without compromising on quality or safety.

As the sole manufacturer to offer both intumescent coatings and fire stopping products, we are uniquely positioned to offer a full package to suit all project requirements. Nullifire's passive fire protection products, in combination with technical support and expert advice, gives all parties peace of mind and assurance of local building code compliance.

Our passive fire protection products undergo initial validation assessments at our in-house facilities prior to undergoing rigorous independent 3<sup>rd</sup> party testing with leading UKAS test houses, resulting in the following accreditation or certification:

- BS EN 1366-3
- BS EN 13501-2
- EAD 350454-00-1104
- CE Marking
- Certifire
- UL-EU Certification

Nullifire, as part of CPG is an active participant in BSI standards, CEN working groups and the ASFP, BCF and CEPE also.



Tremco CPG UK Limited products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco CPG UK Limited written instructions and (b) in any application recommended by Tremco CPG UK Limited, but which is proved to be defective, will be replaced free of charge. No liability can be accepted for the information provided in this leaflet although it is published in good faith and believed to be correct. Tremco CPG UK Limited reserves the right to alter product specifications without prior notice, in line with Company policy of continuous development and improvement.

**Tremco CPG Europe manufactures high performance building materials in order to solve the complex challenges faced by today’s construction industry. With over 1,400 employees across Europe, we are committed to being by your side to shape a world where buildings and structures save energy, last longer and exceed sustainability benchmarks.**

**Delivering World-Class Construction Product Solutions.**

The product brands housed within Tremco CPG Europe cover a wide array of different construction needs and provide a wealth of complex services, support and systems that are rarely found together under one roof.



Window Insulation, Façade Construction, Exterior Insulation & EIFS, Structural & Inplant Glazing, Insulated Concrete Forms (ICFs)



Intumescent Coatings, Fire Stopping



Seamless Resin Flooring, Subfloor Preparation, Car Parking Structures



Potable & Waste Water Industry, Balconies, Terraces, Basements & Foundations



Liquid Applied Systems, Felt Systems, Vegetated Roofing

**Europe’s leading construction products brands...**





Tremco CPG UK Limited  
Coupland Road  
Hindley Green  
WN2 4HT, UK

+44 (0) 1942 251400  
hello@tremcocpg.com  
www.tremcocpg.eu



[www.nullifire.com](http://www.nullifire.com)



[firesales@tremcocpg.com](mailto:firesales@tremcocpg.com)



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